

ABSTRACT

Fast wavelength stabilization can be obtained for a gas discharge laser, such as an excimer or molecular fluorine laser, using a fast wavelength correction unit. A fast wavelength correction unit can include a fast, precise motor driver unit, such as a linear or rotary voice coil motor, a piezo-ceramic motor, or a piezo motor driver unit. These motors can be used to rotate a tuning element, for example, in order to provide for precise and fast wavelength stabilization. The wavelength correction unit can be fully contained within an optical module, without the need for seals, bellows, or feedthroughs as in existing drive systems. Various arrangements and embodiments are described which can be appropriate for differing applications and/or systems.